

30-025-45083

Ver 1.3	MS Guidance										SURVEY CALCULATION PROGRAM										ctrl-shift-I = Insert Survey ctrl-shift-D = Delete Survey			
Minimum Curvature										API Number:				30-025-45083										
OIL & GAS CO.:		Matador Resources						Target Information				VS Referenced to Offset from Surface												
WELL:		Charles Ling Fed Com # 214H						TARGET TVD:		12297.85		NORTH/SOUTH:		-4858.74										
COUNTY / STATE:		Lea		STATE:		New Mexico		TARGET INCL:		87.00		EAST/WEST:		-153.56										
RIG:		Patterson 810						TARGET AZM:		179.56		(Enter 0' N and 0' E for Surface)												
JOB NUMBER:		MSMO-59073																						
SURVEY COMPANY:				DIRECTIONAL COMPANY:				PROPOSED DIRECTION:		179.56		MAG-DEC. / TOTAL CORR.(+/-):				6.42								
MS Guidance				MS Directional								REFERENCED TO:		Grid North										
MWD SPECIALIST(S):				DIRECTIONAL DRILLER(S):				COMMENTS:																
JASON FULTON				DILLON GILLES																				
PATRICK WALKER				MIKE HARVEY																				
PTB:	MD	INC	AZM	TVD	N/S	E/W	VS																	
	17,093	89.00	183.10	12277.72	-4857.58	-165.30	4856.39																	
				30-025-45083										Target Calculations										
SVY	MD	INC	TRUE AZM	TEMP °F	Course Length	TVD	N-S	E-W	Surface Vert Sect	CLOSURE DIST	DIR	DLS/ 100	BUR/ 100'	TVD AT 0' V. SEC.	RIGHT(+) LEFT(-)	ABOVE (+) BELOW (-)								
Tie In	0	0.00	0.00	0.0																				
1	141	0.40	255.20	68.7	141	141.00	-0.13	-0.48	0.12	0.49	255.20	0.28	0.28	395.56	-190.39	11902.29								
2	331	0.70	5.20	73.1	190	330.99	0.86	-1.01	-0.87	1.33	310.38	0.48	0.16	585.61	-189.86	11712.24								
3	513	2.40	323.40	75.8	182	512.92	5.03	-3.18	-5.05	5.95	327.66	1.06	0.93	767.76	-187.72	11530.09								
4	697	3.30	322.30	71.3	184	696.69	12.31	-8.72	-12.38	15.09	324.69	0.49	0.49	951.91	-182.24	11345.94								
5	789	4.30	320.50	74.9	92	788.49	17.07	-12.53	-17.16	21.17	323.71	1.09	1.09	1043.96	-178.47	11253.89								
6	978	4.00	319.90	82.1	189	977.00	27.58	-21.29	-27.74	34.84	322.34	0.16	-0.16	1233.02	-169.79	11064.83								
7	1169	3.50	323.40	87.5	191	1167.59	37.35	-29.05	-37.58	47.32	322.13	0.29	-0.26	1424.12	-162.10	10873.73								
8	1282	3.00	321.30	88.4	113	1280.40	42.43	-32.96	-42.68	53.73	322.16	0.45	-0.44	1537.21	-158.24	10760.64								
9	1481	2.40	319.20	74.9	199	1479.18	49.65	-38.94	-49.95	63.10	321.90	0.31	-0.30	1736.37	-152.31	10561.48								
10	1640	3.30	327.30	83.0	159	1637.98	56.02	-43.58	-56.35	70.98	322.12	0.62	0.57	1895.50	-147.71	10402.35								
11	1830	3.90	332.80	91.1	190	1827.61	66.37	-49.49	-66.75	82.79	323.29	0.36	0.32	2085.67	-141.89	10212.18								
12	2020	3.80	332.10	98.3	190	2017.18	77.68	-55.39	-78.10	95.41	324.51	0.06	-0.05	2275.84	-136.07	10022.01								
13	2211	3.30	331.50	101.9	191	2207.81	88.10	-60.98	-88.57	107.15	325.31	0.26	-0.26	2467.02	-130.57	9830.83								
14	2401	3.90	329.90	108.2	190	2397.44	98.50	-66.83	-99.01	119.03	325.85	0.32	0.32	2657.19	-124.80	9640.66								
15	2591	4.80	331.60	111.8	190	2586.89	111.08	-73.85	-111.65	133.39	326.38	0.48	0.47	2847.31	-117.87	9450.54								
16	2781	4.80	333.90	111.8	190	2776.22	125.22	-81.13	-125.83	149.20	327.06	0.10	0.00	3037.38	-110.71	9260.47								
17	2971	3.80	331.50	113.6	190	2965.69	137.89	-87.63	-138.56	163.38	327.56	0.53	-0.53	3227.51	-104.30	9070.34								
18	3161	3.30	332.40	116.3	190	3155.32	148.27	-93.17	-148.98	175.11	327.86	0.26	-0.26	3417.69	-98.84	8880.16								
19	3352	4.80	333.50	119.9	191	3345.84	160.29	-99.28	-161.05	188.55	328.23	0.79	0.79	3608.84	-92.82	8689.01								

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SVY	MD	INC	TRUE AZM	TEMP °F	Course Length	TVD	N-S	E-W	Surface Vert Sect	CLOSURE		DLS/ 100	BUR/ 100'	TVD AT 0' V. SEC.	RIGHT(+) LEFT(-)	ABOVE (+) BELOW (-)
20	3541	4.30	331.90	120.7	189	3534.24	173.62	-106.14	-174.43	203.49	328.56	0.27	-0.26	3797.95	-86.06	8499.90
21	3731	3.90	335.50	121.6	190	3723.76	185.78	-112.18	-186.64	217.02	328.88	0.25	-0.21	3988.10	-80.12	8309.75
22	3919	5.00	324.10	126.1	188	3911.19	198.24	-119.63	-199.15	231.54	328.89	0.75	0.59	4176.19	-72.76	8121.66
23	4109	3.90	323.70	126.1	190	4100.61	210.15	-128.31	-211.13	246.23	328.59	0.58	-0.58	4366.25	-64.17	7931.60
24	4299	3.50	324.80	127.9	190	4290.22	220.10	-135.48	-221.13	258.45	328.39	0.21	-0.21	4556.37	-57.08	7741.48
25	4488	2.30	325.20	127.9	189	4478.97	227.93	-140.97	-229.00	268.00	328.26	0.64	-0.63	4745.54	-51.65	7552.31
26	4678	4.40	322.30	128.8	190	4668.64	236.82	-147.61	-237.95	279.06	328.07	1.11	1.11	4935.67	-45.08	7362.18
27	4868	3.70	327.90	121.6	190	4858.16	247.78	-155.32	-248.97	292.44	327.92	0.42	-0.37	5125.78	-37.45	7172.07
28	5058	2.80	320.60	125.2	190	5047.86	256.56	-161.53	-257.80	303.18	327.81	0.52	-0.47	5315.93	-31.32	6981.92
29	5161	2.60	320.40	124.3	103	5150.74	260.31	-164.61	-261.56	307.99	327.69	0.19	-0.19	5419.02	-28.26	6878.83
30	5336	2.00	317.80	83.9	175	5325.60	265.63	-169.19	-266.92	314.94	327.50	0.35	-0.34	5594.15	-23.72	6703.70
31	5527	2.10	313.30	104.6	191	5516.48	270.50	-173.98	-271.83	321.62	327.25	0.10	0.05	5785.29	-18.97	6512.56
32	5717	1.90	310.60	109.6	190	5706.36	274.94	-178.90	-276.30	328.02	326.95	0.12	-0.11	5975.41	-14.08	6322.44
33	5908	2.30	312.70	111.8	191	5897.23	279.59	-184.12	-281.00	334.78	326.63	0.21	0.21	6166.53	-8.90	6131.32
34	6097	1.10	283.40	117.2	189	6086.15	282.59	-188.68	-284.03	339.79	326.27	0.76	-0.63	6355.60	-4.37	5942.25
35	6288	0.30	255.50	121.6	191	6277.13	282.89	-190.94	-284.35	341.30	325.98	0.44	-0.42	6546.60	-2.10	5751.25
36	6475	0.50	252.30	124.3	187	6464.13	282.52	-192.20	-283.98	341.69	325.77	0.11	0.11	6733.58	-0.85	5564.27
37	6665	0.60	243.20	126.1	190	6654.12	281.82	-193.87	-283.30	342.06	325.47	0.07	0.05	6923.53	0.84	5374.32
38	6856	0.30	246.20	123.4	191	6845.11	281.16	-195.22	-282.65	342.29	325.23	0.16	-0.16	7114.49	2.19	5183.36
39	7045	0.10	166.10	122.5	189	7034.11	280.80	-195.64	-282.30	342.23	325.14	0.16	-0.11	7303.47	2.61	4994.38
40	7235	0.20	187.30	124.3	190	7224.11	280.31	-195.64	-281.81	341.83	325.09	0.06	0.05	7493.45	2.61	4804.40
41	7425	0.40	194.30	125.2	190	7414.11	279.34	-195.84	-280.84	341.16	324.97	0.11	0.11	7683.39	2.83	4614.46
42	7615	0.30	146.80	125.2	190	7604.11	278.28	-195.74	-279.78	340.23	324.88	0.16	-0.05	7873.34	2.73	4424.51
43	7805	0.90	100.60	124.3	190	7794.10	277.59	-194.00	-279.07	338.66	325.05	0.38	0.32	8063.29	0.99	4234.56
44	7995	1.10	104.10	124.3	190	7984.07	276.87	-190.76	-278.33	336.23	325.43	0.11	0.11	8253.22	-2.24	4044.63
45	8186	1.50	102.20	125.2	191	8175.02	275.90	-186.54	-277.32	333.04	325.94	0.21	0.21	8444.12	-6.45	3853.73
46	8376	1.60	103.60	127.0	190	8364.95	274.75	-181.53	-276.14	329.30	326.55	0.06	0.05	8633.99	-11.45	3663.86
47	8566	1.00	282.60	127.0	190	8554.93	274.49	-180.57	-275.87	328.56	326.66	1.37	-0.32	8823.95	-12.41	3473.90
48	8756	0.80	286.20	133.3	190	8744.91	275.22	-183.46	-276.62	330.76	326.31	0.11	-0.11	9013.97	-9.52	3283.88
49	8947	0.10	230.40	131.5	191	8935.90	275.48	-184.87	-276.90	331.77	326.14	0.39	-0.37	9204.98	-8.12	3092.87
50	9137	0.50	160.70	136.0	190	9125.90	274.60	-184.72	-276.01	330.95	326.07	0.25	0.21	9394.93	-8.26	2902.92
51	9328	0.30	171.40	136.9	191	9316.89	273.32	-184.37	-274.72	329.69	326.00	0.11	-0.10	9585.86	-8.60	2711.99
52	9518	0.60	157.20	139.6	190	9506.89	271.91	-183.91	-273.31	328.26	325.93	0.17	0.16	9775.78	-9.05	2522.07
53	9709	0.50	166.50	142.3	191	9697.88	270.17	-183.33	-271.57	326.50	325.84	0.07	-0.05	9966.68	-9.62	2331.17
54	9899	0.70	193.20	144.1	190	9887.87	268.24	-183.40	-269.64	324.94	325.64	0.18	0.11	10156.56	-9.53	2141.29
55	10090	0.40	259.40	146.8	191	10078.86	266.98	-184.33	-268.39	324.43	325.38	0.34	-0.16	10347.49	-8.60	1950.36

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			TRUE	TEMP	Course				Surface	CLOSURE		DLS/	BUR/	TVD AT 0'	RIGHT(+)	ABOVE (+)
SVY	MD	INC	AZM	°F	Length	TVD	N-S	E-W	Vert Sect	DIST	DIR	100	100'	V. SEC.	LEFT(-)	BELOW (-)
56	10278	0.50	252.00	148.6	188	10266.85	266.61	-185.75	-268.02	324.93	325.13	0.06	0.05	10535.47	-7.17	1762.38
57	10469	0.20	351.50	150.4	191	10457.85	266.68	-186.59	-268.10	325.47	325.02	0.30	-0.16	10726.47	-6.33	1571.38
58	10659	0.20	83.50	154.0	190	10647.85	267.04	-186.31	-268.47	325.61	325.10	0.15	0.00	10916.49	-6.61	1381.36
59	10849	0.20	220.70	154.0	190	10837.85	266.83	-186.20	-268.25	325.37	325.09	0.20	0.00	11106.47	-6.72	1191.38
60	11040	0.30	299.50	155.8	191	11028.85	266.82	-186.85	-268.25	325.74	325.00	0.17	0.05	11297.47	-6.07	1000.38
61	11231	0.70	320.30	155.8	191	11219.84	267.97	-188.03	-269.40	327.36	324.94	0.23	0.21	11488.53	-4.90	809.32
62	11421	0.30	341.50	143.2	190	11409.83	269.33	-188.93	-270.77	328.99	324.95	0.23	-0.21	11678.59	-4.01	619.26
63	11563	0.60	85.30	143.2	142	11551.83	269.74	-188.31	-271.18	328.97	325.08	0.52	0.21	11820.61	-4.64	477.24
64	11613	1.00	145.10	135.1	50	11601.83	269.41	-187.80	-270.84	328.40	325.12	1.74	0.80	11870.59	-5.14	427.26
65	11708	8.80	184.30	136.0	95	11696.41	261.47	-187.87	-262.90	321.96	324.30	8.47	8.21	11964.76	-5.01	333.09
66	11755	9.70	179.70	136.9	47	11742.80	253.92	-188.12	-255.36	316.02	323.47	2.48	1.91	12010.75	-4.71	287.10
67	11802	15.30	186.70	137.8	47	11788.67	243.80	-188.82	-245.24	308.37	322.24	12.32	11.91	12056.09	-3.92	241.76
68	11897	20.70	178.10	137.8	95	11879.01	214.54	-189.73	-215.99	286.40	318.51	6.32	5.68	12144.89	-2.79	152.96
69	11945	24.20	177.90	136.0	48	11923.36	196.23	-189.09	-197.67	272.50	316.06	7.29	7.29	12188.29	-3.29	109.56
70	11992	30.70	177.10	136.9	47	11965.05	174.59	-188.12	-176.03	256.66	312.86	13.85	13.83	12228.84	-4.09	69.01
71	12039	39.60	178.60	136.9	47	12003.44	147.58	-187.15	-149.01	238.34	308.26	19.02	18.94	12265.82	-4.86	32.03
72	12087	47.50	179.40	137.8	48	12038.20	114.54	-186.59	-115.97	218.94	301.54	16.50	16.46	12298.85	-5.16	-1.00
73	12119	52.90	179.60	138.7	32	12058.68	89.97	-186.38	-91.39	206.95	295.77	16.88	16.88	12318.03	-5.19	-20.18
74	12151	57.50	181.00	139.6	32	12076.94	63.70	-186.52	-65.13	197.10	288.86	14.82	14.38	12334.92	-4.84	-37.07
75	12182	62.20	181.70	139.6	31	12092.50	36.91	-187.16	-38.34	190.76	281.16	15.29	15.16	12349.08	-4.00	-51.23
76	12231	70.10	181.50	140.5	49	12112.30	-7.86	-188.41	6.41	188.57	267.61	16.13	16.12	12366.53	-2.41	-68.68
77	12254	73.90	180.90	139.6	23	12119.41	-29.72	-188.86	28.27	191.19	261.06	16.71	16.52	12372.49	-1.78	-74.64
78	12344	80.70	180.00	147.7	90	12139.18	-117.46	-189.54	116.01	222.99	238.21	7.62	7.56	12387.67	-0.43	-89.82
79	12439	79.70	180.30	150.4	95	12155.35	-211.08	-189.79	209.61	283.85	221.96	1.10	-1.05	12398.93	0.54	-101.08
80	12533	82.50	180.20	154.0	94	12169.89	-303.93	-190.19	302.46	358.54	212.04	2.98	2.98	12408.61	1.65	-110.76
81	12628	86.00	179.70	154.0	95	12179.41	-398.44	-190.11	396.97	441.47	205.51	3.72	3.68	12413.17	2.30	-115.32
82	12724	90.30	179.60	157.6	96	12182.51	-494.37	-189.52	492.90	529.45	200.98	4.48	4.48	12411.24	2.45	-113.39
83	12820	90.10	179.20	160.3	96	12182.17	-590.36	-188.52	588.90	619.73	197.71	0.47	-0.21	12405.88	2.18	-108.03
84	12915	90.30	178.60	162.1	95	12181.84	-685.34	-186.69	683.89	710.32	195.24	0.67	0.21	12400.57	1.08	-102.72
85	13011	91.10	178.00	163.9	96	12180.67	-781.29	-183.85	779.86	802.63	193.24	1.04	0.83	12394.36	-1.03	-96.51
86	13106	91.40	179.90	163.9	95	12178.59	-876.25	-182.11	874.82	894.97	191.74	2.02	0.32	12387.31	-2.04	-89.46
87	13202	87.40	177.40	166.6	96	12179.60	-972.19	-179.85	970.78	988.68	190.48	4.91	-4.17	12383.29	-3.56	-85.44
88	13298	88.10	177.70	169.3	96	12183.37	-1068.03	-175.74	1066.65	1082.39	189.34	0.79	0.73	12382.03	-6.93	-84.18
89	13393	87.10	177.50	171.9	95	12187.35	-1162.86	-171.77	1161.51	1175.48	188.40	1.07	-1.05	12381.04	-10.17	-83.19
90	13489	87.10	177.00	172.8	96	12192.20	-1258.63	-167.17	1257.30	1269.68	187.57	0.52	0.00	12380.88	-14.04	-83.03

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91	13584	87.40	177.10	173.7	95	12196.76	-1353.39	-162.29	1352.10	1363.09	186.84	0.33	0.32	12380.47	-18.19	-82.62
92	13680	88.20	175.00	171.9	96	12200.45	-1449.09	-155.68	1447.85	1457.42	186.13	2.34	0.83	12379.14	-24.07	-81.29
93	13776	87.60	176.30	172.8	96	12203.97	-1544.74	-148.40	1543.56	1551.85	185.49	1.49	-0.63	12377.64	-30.61	-79.79
94	13871	89.30	179.60	175.5	95	12206.54	-1639.63	-145.01	1638.47	1646.03	185.05	3.91	1.79	12375.23	-33.27	-77.38
95	13967	86.30	179.60	178.2	96	12210.22	-1735.55	-144.34	1734.39	1741.54	184.75	3.13	-3.13	12373.89	-33.21	-76.04
96	14062	89.80	181.80	178.2	95	12213.45	-1830.46	-145.50	1829.29	1836.24	184.54	4.35	3.68	12372.15	-31.32	-74.30
97	14156	89.60	181.80	179.1	94	12213.94	-1924.42	-148.45	1923.22	1930.13	184.41	0.21	-0.21	12367.72	-27.64	-69.87
98	14251	93.80	181.60	178.2	95	12211.13	-2019.31	-151.27	2018.09	2024.97	184.28	4.43	4.42	12359.93	-24.10	-62.08
99	14347	95.20	181.60	181.8	96	12203.60	-2114.98	-153.94	2113.73	2120.57	184.16	1.46	1.46	12347.39	-20.69	-49.54
100	14442	92.20	179.50	166.6	95	12197.46	-2209.76	-154.85	2208.50	2215.18	184.01	3.85	-3.16	12336.29	-19.06	-38.44
101	14538	91.60	179.70	171.1	96	12194.28	-2305.70	-154.18	2304.45	2310.85	183.83	0.66	-0.63	12328.08	-18.99	-30.23
102	14633	89.70	179.60	171.9	95	12193.20	-2400.69	-153.60	2399.44	2405.60	183.66	2.00	-2.00	12322.02	-18.84	-24.17
103	14728	90.00	178.90	173.7	95	12193.45	-2495.68	-152.35	2494.44	2500.33	183.49	0.80	0.32	12317.29	-19.35	-19.44
104	14824	86.80	178.20	173.7	96	12196.13	-2591.60	-149.93	2590.37	2595.93	183.31	3.41	-3.33	12314.94	-21.04	-17.09
105	14918	88.50	178.90	177.3	94	12199.99	-2685.49	-147.55	2684.27	2689.54	183.14	1.96	1.81	12313.88	-22.70	-16.03
106	15013	85.40	177.50	176.4	95	12205.04	-2780.29	-144.57	2779.10	2784.05	182.98	3.58	-3.26	12313.96	-24.95	-16.11
107	15108	84.90	178.20	180.9	95	12213.07	-2874.88	-141.02	2873.71	2878.34	182.81	0.90	-0.53	12317.04	-27.77	-19.19
108	15204	87.80	178.80	179.1	96	12219.18	-2970.64	-138.51	2969.49	2973.87	182.67	3.08	3.02	12318.13	-29.55	-20.28
109	15299	88.20	178.20	182.7	95	12222.50	-3065.55	-136.03	3064.42	3068.57	182.54	0.76	0.42	12316.47	-31.30	-18.62
110	15395	89.00	178.90	184.5	96	12224.85	-3161.49	-133.60	3160.37	3164.31	182.42	1.11	0.83	12313.78	-32.99	-15.93
111	15489	87.80	179.70	180.9	94	12227.47	-3255.45	-132.45	3254.33	3258.14	182.33	1.53	-1.28	12311.48	-33.42	-13.63
112	15585	87.10	178.20	183.6	96	12231.74	-3351.33	-130.69	3350.23	3353.88	182.23	1.72	-0.73	12310.73	-34.44	-12.88
113	15680	88.30	178.60	185.4	95	12235.55	-3446.22	-128.04	3445.13	3448.59	182.13	1.33	1.26	12309.57	-36.36	-11.72
114	15775	87.10	179.90	175.5	95	12239.37	-3541.13	-126.80	3540.05	3543.40	182.05	1.86	-1.26	12308.41	-36.88	-10.56
115	15870	87.60	180.20	185.4	95	12243.76	-3636.03	-126.88	3634.94	3638.24	182.00	0.61	0.53	12307.83	-36.06	-9.98
116	15966	87.40	180.20	188.1	96	12247.95	-3731.93	-127.22	3730.85	3734.10	181.95	0.21	-0.21	12306.99	-34.99	-9.14
117	16061	87.90	179.90	187.2	95	12251.84	-3826.85	-127.30	3825.76	3828.97	181.91	0.61	0.53	12305.91	-34.18	-8.06
118	16156	90.00	180.40	188.1	95	12253.58	-3921.83	-127.55	3920.74	3923.91	181.86	2.27	2.21	12302.67	-33.20	-4.82
119	16250	88.40	181.80	185.4	94	12254.90	-4015.80	-129.35	4014.69	4017.88	181.84	2.26	-1.70	12299.06	-30.68	-1.21
120	16345	88.40	182.40	189.9	95	12257.55	-4110.70	-132.83	4109.56	4112.84	181.85	0.63	0.00	12296.74	-26.47	1.11
121	16439	89.20	182.40	190.8	94	12259.52	-4204.59	-136.77	4203.42	4206.82	181.86	0.85	0.85	12293.79	-21.81	4.06
122	16535	90.30	183.80	190.8	96	12259.94	-4300.45	-141.96	4299.23	4302.79	181.89	1.85	1.15	12289.19	-15.89	8.66
123	16629	88.40	182.80	188.1	94	12261.00	-4394.28	-147.37	4393.02	4396.75	181.92	2.28	-2.02	12285.34	-9.75	12.51
124	16724	86.70	181.40	188.1	95	12265.06	-4489.13	-150.85	4487.83	4491.66	181.92	2.32	-1.79	12284.43	-5.55	13.42
125	16818	87.80	181.70	193.5	94	12269.57	-4582.98	-153.39	4581.67	4585.55	181.92	1.21	1.17	12284.02	-2.29	13.83

[illegible]